



Equine Ambulatory News

Spring 2007 • Volume Three - Issue One

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Rabies and Horses

What You Need to Know

Rabies is an uncommon disease in horses in Missouri, but when it strikes it can be devastating to horses and owners, as it is a fatal disease. The average number of rabid animals reported in Missouri from 1995 through 2004 ranged from 26 to 59, with an average of 40 cases per year (mostly wild animals). In 2005 we saw an increase in the number of rabies positive cases reported to the state, with the number reaching 73. So far, in 2006 the number of rabies positive animals reported is at 63, including 53 bats, 7 skunks, 1 cow, and 2 horses.

Horses become infected with the rabies virus by saliva from a wild animal carrying the virus. The most common sources of infection for horses include bats, skunks, raccoons, and foxes. Wild animals account for approximately 88 percent of animal rabies in the United States.

After horses are exposed to rabies, the incubation period (time from bite until clinical signs are seen) in domestic animals can be variable, but typically averages 3 to 6 weeks. Horses that are infected with rabies can exhibit a wide variety of clinical signs. Common clinical signs include ataxia (wobbly), behavior changes, anorexia, paralysis, colic, or choke. If your horse displays any of these signs, your regular veterinarian should be contacted. If you believe your horse has come in contact with an animal with rabies, you should isolate the horse until your veterinarian has evaluated the horse.

Two inactivated vaccines (Imrab-1 and Rabguard) are available and approved for use in horses, and provide high quality protection from the virus. These vaccinations are recommended to be given annually in high-risk areas. If your horse has never been vaccinated for rabies, one booster is required 3-4 weeks after the initial vaccination.





PUBLISHED
ANNUALLY BY
THE EQUINE
AMBULATORY
SECTION
OF THE
UNIVERSITY OF
MISSOURI
COLLEGE OF
VETERINARY
MEDICINE'S
VETERINARY
MEDICAL
TEACHING
HOSPITAL

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Commentary

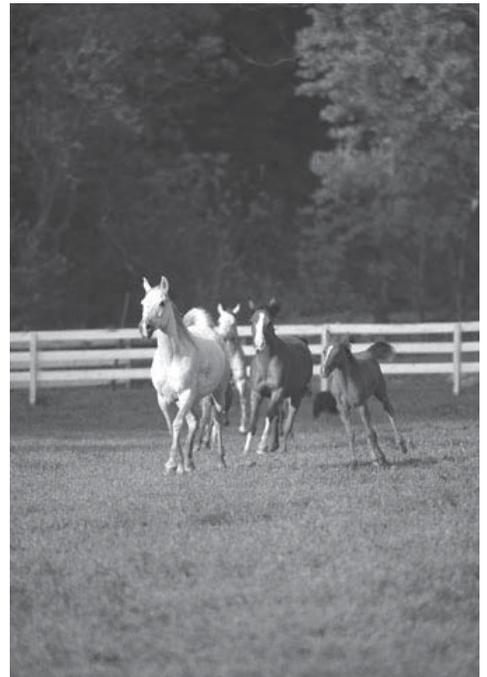
It's hard to believe another year has passed, as we settle into Missouri's beautiful fall weather. This is the perfect time of year to spend with your horse on long trail rides, showing, or just enjoying time with them in the back yard.

We are happy to say, that in its fifth year, the equine ambulatory program is thriving. We are very excited to welcome Dr. Dawna Voelkl as our newest associate. Dr. Voelkl brings with her an expertise in equine reproduction which will allow us to offer state-of-the-art reproductive technologies not previously offered.

Along with Dr. Voelkl, we are happy to introduce you to our three new interns who joined us in early June, Dr. Megan Moses, Dr. Kristin Kultgen, and Dr. Carly Whittal. The interns have a special interest in working with horses, and potentially going on to do a residency, specializing in either equine medicine or equine surgery. Every June we will be welcoming a new crop of interns.

As our ambulatory practice continues to grow, we would like to take this opportunity to thank all of our clients and patients for your continued support. We look forward to seeing you in the upcoming year. Please do not hesitate to call if you have any questions or concerns relating to your equine friends. Have a wonderful fall and enjoy the weather!

Alison LaCarrubba, DVM



The Equine Ambulatory Team at the University of Missouri

Left to right:
Megan Moses, Carly Whittal,
and Kristin Kultgen.



Dr. Alison LaCarrubba, originally from New York, graduated from The University of Missouri College of Veterinary Medicine in 2001. Alison stayed on at the University to complete an internship in equine medicine and surgery.

After the internship, Alison spent a year working in an all-equine private practice with a special interest in reproduction. Alison returned to the University in July, 2003. Although the majority of Alison's time is spent in the ambulatory truck, some time will be spent working with the medicine section in the teaching hospital.

Alison, her husband Corey, and son Henry are also eagerly anticipating the arrival of the newest family member, due in early December.

Dr. Dawna Voelkl was born and raised in western Pennsylvania, near Pittsburgh. Dawna graduated from Cornell University College of Veterinary Medicine in 2003, after which she spent one year at the University of Minnesota working in large animal medicine, surgery and reproduction.

Dawna then completed a residency in Large Animal Clinical Reproduction with an emphasis on the horse at New Bolton Center of the University of Pennsylvania. In August 2006, Dawna earned board certification in theriogenology (veterinary reproduction). Within the field of equine reproduction, Dawna has particular interest in working with



breeding stallions, semen freezing, and embryo transfer and looks to expand the reproductive services offered by the Equine Ambulatory Service.

The Interns

Dr. Kristin Kultgen was born and raised in Random Lake, WI. She is a 2006 graduate from the University of Wisconsin School of Veterinary Medicine. Kristin grew up riding and showing American Saddlebreds. Her areas of equine veterinary interest include internal medicine, neonatal care and dentistry. Following her internship, Kristin plans to either do a residency in equine internal medicine or work in a private equine ambulatory practice.

Dr. Megan Moses was born and raised in the mountains of North Carolina. She grew up riding English, but secretly wanted to be a cowgirl. Megan graduated from North Carolina State University's College of Veterinary Medicine in 2006. Her areas of veterinary interest include lameness and reproduction. After completion of her internship, Megan plans to work in a private practice somewhere in the Southeast.

Carly Whittal was born and raised in Savannah, Georgia where she grew up riding horses, mostly hunter/jumper and the occasional trail ride. She graduated from the University of Georgia College of Veterinary Medicine in May of 2006 and also completed her undergraduate work at the University of Georgia where she found her passion for the Georgia Dawgs (please no emergency calls on Saturdays in the fall). After completing her internship, Carly hopes to pursue a medicine residency somewhere in the southeast.



Dawna Voelkl

Equine Dentistry

Equine dental problems are often underestimated because many horses with significant dental problems appear “normal”

We know that a thorough oral and dental examination should be a part of a general physical exam and/or part of a pre-purchase examination on every horse. Although a horse may appear “normal,” he or she may have very sharp points, causing ulcerations in the sides of the mouth, loose teeth, or very overgrown teeth which can make it impossible to properly chew.

A complete oral and dental exam consists of a veterinarian putting a full mouth speculum into your horse’s mouth. The speculum is heavy and potentially dangerous, so horses are tranquilized prior to applying it. The tranquilization also allows for a more thorough examination of the oral cavity.

After the mouth speculum has been placed, your veterinarian will examine your horse’s oral cavity and teeth for any abnormalities. Common oral abnormalities include but are not limited to the following:



Oral Ulcers

The horse’s upper jaw is set wider than its lower jaw. When they chew, the jaw has a lateral excursion, moving from side-to-side, grinding the coarse feed and hay. This side to side movement causes sharp points to form on the outside of the upper teeth (along the cheek) and the inside of the lower teeth (along the tongue). When the teeth get too sharp, they can cause significant damage, resulting in large and painful ulcerations.

Hooks

Hooks are pointed, narrow overgrowths that usually develop on the very last molar on the bottom set of teeth and the first cheek tooth on the top set of teeth. The hooks are a result of an offset jaw. Horses that have these hooks will always be predisposed because of their offset jaw. These can be very sharp and very uncomfortable for your horse and will often prevent the normal side-to-side excursion of the jaw that is necessary for the grinding of food.

Wolf Teeth

These are the first premolars and not all horses have them. Wolf teeth first appear around 6 months of age. Wolf teeth do not necessarily cause problems, and if you have an older horse with wolf teeth that does not have any discomfort related to biting, you may elect to leave the wolf teeth in place. That said, because

the wolf teeth have no known function, and may cause problems with biting, they are typically removed in young horses prior to training.



Bit Seats

The term used to describe the procedure for rounding off the first upper and lower cheek teeth (2nd premolars). Horses have varying amounts of soft tissue around their cheeks and it is possible this tissue may be pulled onto the 2nd premolars by a bit. The bit seat creates a space and smooths off the sharp corners of the 2nd premolars, making your horse more comfortable.

It is recommended that your horse's mouth be examined every 6 months to a year. Frequent examinations are especially important in geriatric

horses, and young horses. Geriatric horses may have loose or missing teeth that need to be addressed. Between the ages of 2 and 5, horses will shed all of their baby teeth and acquire their adult teeth. This period of high turnover is a time we may see problems in these young horses. Horses with a history of weight-loss, difficulty eating, dropping feed, or choke should have a dental examination performed. For more information on equine dentistry or to schedule a routine equine dental exam/float, please contact your veterinarian.

Focus on Dentistry

This past summer Dr. LaCarrubba and Dr. Voelkl attended a special focus group specifically addressing the topic of equine dentistry, hosted by the American Association of Equine Practitioners. Over the last decade we have seen many changes concerning the practices and attitudes associated with equine dentistry.

"Two floats and a bucket" just is not going to cut it any more. Our clients expect high quality care for their equine friends, and we are happy to be able to provide that care. Our annual dental examination includes a complete oral exam with a full mouth speculum allowing us to examine all of the teeth by feel, as well as by visualization.

Our speculum and power equipment allow us to address the day to day dental issues, such as sharp enamel points, as well as providing the ability to deal with more invasive problems, such as long hooks, and wave mouth. We feel confident that a thorough dental examination and annual float is critical to the health and well being of our patients, and we are committed to providing that care.

Colitis

What is it
and why we
should be
worried

Colitis is a very serious and potentially life threatening disease that occurs in the horse. Colitis is an inflammatory condition which affects the large colon, resulting in diarrhea. The large colon is responsible for re-absorbing a large percentage of fluid which is normally secreted into the gastrointestinal tract from the small intestine for the normal digestive processes. When there is a disease process affecting the colon, it is unable to absorb this fluid, and the result is diarrhea, which can quickly become a fatal problem in horse.

What are the causes of colitis and what are some complications of colitis in the horse?

Colitis is often the result of a disturbance of the horse's GI flora. There may be a disruption in flora associated with a stressful situation (such as a trailer ride or horse show), or antibiotic ingestion may disrupt flora. Salmonella, Potomac Horse Fever, Clostridium and parasite overload also cause colitis. There are also several toxic causes of colitis, including use of non-steroidal anti-inflammatory drugs (like bute and Banamine), and blister beetle ingestion.

While the cause of the colitis is important, the complications of colitis can be life threatening, making colitis a very serious problem. As a result of inflammation in the colon, bacterial toxins are able to gain access to

the horse's blood stream, resulting in a condition called endotoxemia. The consequences of endotoxemia can be very serious and include: laminitis (founder), shock, organ failure, and chronic protein loss/weight loss.

What are the signs I should be looking for when my horse has diarrhea and when should I call my veterinarian?

One should be concerned any time a horse has loose feces. Clinical signs of colitis can range from cow pie consistency feces to profuse, watery diarrhea that is explosive, and foul-smelling. Sometimes horses can show signs of colic prior to having diarrhea. These signs include: rolling, pawing, kicking or looking at their abdomen and/or stretching. Horses with colitis are frequently depressed, lethargic, inappetent, and have an elevated temperature. It is critical to call your veterinarian immediately when you notice signs of diarrhea. Horses with this condition lose a large amount of fluid, quickly becoming dehydrated and at risk for further complications.

Once your veterinarian arrives, he or she can gauge the severity of the colitis and determine the best course of treatment. They can try to make your horse more comfortable if signs of colic are present by administering



Preventative Medicine

Vaccinations

Remember, in addition to vaccinations routinely given to your horse, brood mares require rhinopneumonitis boosters during their fifth, seventh and ninth month of gestation in order to help prevent abortions and weak foals. It is also important to vaccinate your brood mares one month prior to giving birth in order to boost immunity in the foals. Foals receive all of their antibodies from their mother's first milk, or colostrum. By boosting all of the vaccinations that your mare normally receives one month prior to birth, your mares will produce better quality colostrums, resulting in healthier foals. If you have any questions regarding vaccinations and your horse, please call us and we would be happy to discuss an appropriate vaccination schedule that fits your horses needs.

Deworming

All horses should be on a regular deworming schedule. Ideally we like to deworm every eight weeks, alternating products. We recommend using an ivermectin based product every other time you deworm. If your horse is on a daily dewormer, like Strongid C, be sure to use an ivermectin product twice yearly as well. Deworming in the fall, after the first frost, will help eliminate bots over the winter months.



pain medication. Your veterinarian will likely begin fluid therapy either by giving electrolytes and water through a

nasogastric tube or directly into the vein. It is also a good idea to run blood work in order to assess the severity of the colitis, the impact of the colitis on other organs in the body, and to try to find the cause of the colitis. Fecal samples may be collected to try to determine the cause of the colitis. Your veterinarian will be able to tell you if your horse's condition is severe enough to warrant referral to the MU Veterinary Medical Teaching Hospital for more intensive medical treatment and 24 hour monitoring.

Digital Radiography

We are very excited to announce that both the Veterinary Medical Teaching Hospital and Equine Ambulatory will be acquiring a digital radiography unit in November. Digital radiography allows us to take radiographs on the farm and immediately view these images on a computer screen. We will no longer have to run back to the clinic to develop film, which will allow for more immediate diagnosis and implementation of a treatment plan. Along with increasing our efficiency, the quality of the image will be superior to traditional radiographs. We are excited to be introducing this new technology to our practice.

Spotlight on Research

Please contact the Equine Clinic at the University of Missouri College of Veterinary Medicine's Veterinary Medical Teaching Hospital at 573/882-3513 if you have questions about this newsletter or equine health.

A variety of research is performed at the MU College of Veterinary Medicine. With each newsletter we will bring you a little closer to some of the new and interesting studies which are underway at the University, and show how this research can directly affect you and your equine companions.



The Comparative Orthopedic Laboratory (COL) at the University of Missouri, was founded with the goal of collaborating research interests relating to both animals and humans. The lab primarily focuses on researching problems affecting articular cartilage and bone, soft tissues surrounding joints, and fracture repair. Investigating

diseases such as arthritis and developmental orthopedic diseases has a direct impact on the horse, as we are always interested in new and better ways to manage and prevent these sorts of problems.

Another area of interest to University of Missouri researchers is laminitis, or founder. As many of you know, laminitis can be a very debilitating and unrelenting disease. Most of the laminitis research at the University focuses on identifying

the causes of laminitis, along with gaining an understanding for the processes by which laminitis develops within the hoof. The laminitis research team at MU, which includes Dr. Philip Johnson and Dr. Nat Messer, our internal medicine specialists, is especially interested in the association between obesity and the risk of developing laminitis.